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Kyung-Eun Lee

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EXAMINER

RABOVIANSKI, JIVKA A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/724,161

Applicant(s)

LEE ET AL.

Examiner

JIVKA RABOVIANSKI

Art Unit

2426

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 1st 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/88)
Paper No(s)/Mail Date 01/27/2005, 04/04/2007
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This office action is in response to applicant's response filed on December 1st 2008.

Status of Claims

Claims 3, 11, 15 - 20 have been amended.

Claims 1 - 20 are pending in the Application.

Claims 21 – 24 have been cancelled.

Priority

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Response to Amendment

Applicant's arguments filed December 1st 2008 have been fully considered but they are not persuasive. Therefore, the rejections made in the previous Office Action are maintained and restated, with changes as needed to address the amendments.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 20 recites the limitation "said device" in 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 24 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention and being anticipated by Leporini, David US 20030110382 A1 (Leporini hereinafter).

Regarding claim 1, Leporini teaches:

A hybrid digital broadcasting (the hybrid fiber coax (HFC) network [0179]) receiver for reproducing digital multimedia data, comprising:

a broadcast receiving module comprising (Fig. 4/ receiver/decoder 2000):

a receiving section for receiving and demodulating a digital broadcasting data stream which includes a multiplexed and transmitted

plurality of compressively encoded and scrambled programs (the term "receiver/decoder" as used herein may connote a receiver for receiving either encoded signal – [0003]; Fig. 4/ 2016, 2018, 2012 and 2014);

a first demultiplexer for demultiplexing said demodulated digital broadcasting data stream, and selecting and extracting digital broadcasting data corresponding to a program selected by a user (Fig. 2000/ 2010 - demultiplexer for demultiplexing the demodulated broadcasting data stream and extracting the data corresponding to remote control selection – Fig. 2000/2080);

a conditional access section for detecting conditional access information and decrypting said selected digital broadcasting data using said detected information; and a decoder module comprising (Fig. 4 and 10; the scrambled content are all delivered independently to a receiver/decoder, from a first party, second party and third party – Fig. 10/2052, [0263]; the scrambled data and encrypted control word are then received by the receiver/decoder having access to an equivalent to the exploitation key stored on a smartcard inserted in the receiver/decoder to decrypt the encrypted control word and thereafter descramble the transmitted data – [0176]):

a second demultiplexer for demultiplexing a digital multimedia data stream which includes a multiplexed plurality of compressively encoded digital multimedia data (Fig. 4/ 2010, 2100 – hard disc - on which audiovisual and other data can be stored – [0170]); and

a decoding section for decoding digital broadcasting data output from said broadcast receiving module and digital multimedia data output from said second demultiplexer – (the demux 2010 executes the operation of the first and the second demultiplexer- the decoding section is connected to the demux and 2004 that receives data from the hard disc - Fig. 4.

Regarding claim 2, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 1, further comprising a smart card for receiving said conditional access information and generating a scrambling key (Fig. 4 and [0069] - The processor is preferably adapted to utilize a master session key to generate an encryption/authentication key).

Regarding claim 3, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 1, wherein said conditional access information comprises program management information and subscriber management information (The processor may

be adapted to encapsulate an encrypted data object in a further encrypted data object, and furthermore may be adapted to encapsulate an Entitlement Control Message in a (Entitlement Management Message) – [0176], [0257], [0260]).

Regarding claim 4, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 2, wherein said conditional access section receives said scrambling key from said smart card and decrypts said digital broadcasting data (The scrambled data and encrypted control word are then received by the receiver/decoder 2000 having access to an equivalent to the exploitation key stored on a smartcard inserted in the receiver/decoder to decrypt the encrypted control word and thereafter descramble the transmitted data [0176]).

Regarding claim 5, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 1, further comprising a multimedia module for supplying said digital multimedia data stream to said second demultiplexer (multimedia includes a combination of text, audio, still images, animation, video – the source of multimedia is hard disc that contains video, audio and image data – Fig. 4/ 2100; audiovisual and other data can be stored [0171]).

Regarding claim 6, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 1, wherein said digital multimedia data comprises audio data and video data (Fig. 4/2024 and 2026).

Regarding claim 7, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 6, wherein said second demultiplexer separates said audio data and said video data from said digital multimedia data stream (The demux 2010 separates the received signal into two signals audio and video – 2024 and 2026).

Regarding claim 8, Leporini teaches:

The hybrid digital broadcasting receiver according to claim 1, wherein said broadcast receiving module and said decoder module are each formed in a single integrated circuit (integrated circuits capable of performing the operations required in the receiver/decoder – [0392], where some components may be implemented by dedicated hardware [0394]; Fig. 7).

Regarding claim 9, Leporini teaches:

A hybrid digital broadcasting receiver for reproducing digital multimedia data, comprising:

a receiving section for receiving a digital broadcasting data stream which includes multiplexed and transmitted digital broadcasting data packets and conditional access information packets for a plurality of programs (a receiver 2000 – Fig. 3- multiplexer 1030 – receiving compressed signal from compressor 1010 and conditional access information from 1100 – [0180] - [0185]; Fig. 4/2000 for receiving “multiplexer/scrambler, where the scrambled content 1300 (CONTENT*) is generated and then transmitted to the receiver/decoder 2000” – [0263];

a first demultiplexer for separating said conditional access information packets and digital broadcasting data packets for a program selected by a user from said received digital broadcasting data stream (The receiver/decoder 2000 *demultiplexes* the signals to obtain scrambled programs [0190]; if a program is scrambled, the receiver/decoder extracts the corresponding ECM from the MPEG-2 stream and passes the ECM to the "daughter" smartcard of the end user. These slots into a housing in the receiver/decoder 2000. The daughter smartcard 5500 controls whether the end user has the right to decrypt the ECM and to access the program [0191])

a conditional access section for detecting conditional access information from said conditional access information packets and decrypting said separated digital broadcasting data packets using said conditional access information (If the end user does have the rights, the ECM is decrypted and the control word extracted – [0191], [0198]);

a second demultiplexer for receiving a digital multimedia data stream which includes multiplexed compressively encoded audio packets and video packets, and separating said audio packets and said video packets from said digital multimedia data stream (the second demultiplexer Fig. 4/2010 receives a signal from Fig. 4/(2004 – receiving data from 2070, 2100 – see [0197]), and outputs it to the MPEG vide decoder Fig. 4/2028; Fig. 4/ 2000, 2040, 2010, 2026, 2028 and 2038, 2040); and

a decoding section for decoding digital broadcasting data packets output from said conditional access section and audio packets and video packets output from said second demultiplexer (Fig.4/2026 and 2028).

Regarding claim 10, see rejection in claim 2 above.

Regarding claim 11, see rejection in claim 3 above.

Regarding claim 12, see rejection in claim 4 above.

Regarding claim 13, see rejection in claim 5 above.

Regarding claim 14, see rejection in claim 8 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leporini, and further in view of Ho; Kesse US 6622307 B1.

Regarding claim 15:

An integrated chip having at least one surface for processing digital broadcasting data, *the integrated chip comprising:*

a receiving section disposed on said at least one surface of said integrated chip for receiving and demodulating a digital broadcasting data stream which includes multiplexed and transferred digital broadcasting data

packets and conditional access information packets for a plurality of programs (see rejection in claim 9);

an error correcting disposed on said at least one surface of said integrated chip for correcting any error in said demodulated digital broadcasting data stream (a bit error rate (BER) of a tuner, a signal level, the number of accesses to a particular part of the receiver/decoder software; [0048] where many FEC coders can generate a bit-error rate (BER) signal.

a demultiplexer disposed on said at least one surface of said integrated chip for separating said conditional access information packets and digital broadcasting data packets for a program selected by a user from said demodulated digital broadcasting data stream (see rejection in claim 9); and

a conditional access section disposed on said at least one surface of said integrated chip and in electrical communication with said demultiplexer for detecting conditional access information from said conditional access information packets and decrypting said separated digital broadcasting data packets using said conditional access information (see rejection in claim 9).

Leporini discloses (integrated circuits capable of performing the operations required in the receiver/decoder – [0392], where some components may be implemented by dedicated hardware [0394]; Fig. 7). The reference does not specifically disclose the receiving section, demultiplexer and conditional access section are formed in a integrated circuit chip and the demultiplexer and decoding section are formed in a integrated circuit chip (specification [0016]). Nevertheless, Ho discloses IC having a channel demultiplexer, a decryption circuit and a conditional access module col. 8 lines 57 – 59, Fig. 4A; decoder IC col. 12 lines 35 – 37, Fig. 4A.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Leporini with the teaching of integrated circuits as a part of the receiver as further taught in Ho to meet all limitation in claim 15.

Regarding claim 16, see rejection in claims 3 and 15 above.

Regarding claim 17, see rejection in claim 2 above and [0009].

Regarding claim 18, see rejection in claim 4 above.

Regarding claim 19, Leporini teaches:

The device according to claim 15, further comprising a decoder module interface for supplying said decrypted digital broadcasting data to said decoder module (receiver/decoders may include a decoder integral with the receiver for decoding the received signals, for example, in a "set-top box", such as a decoder functioning in combination with a physically separate receiver, or such a decoder [0003]; Fig. 2000 – a decoder (2026 and 2028) for receiving decrypted audiovisual data.

Regarding claim 20, Leporini teaches:

An integrated chip according to claim 15, wherein said device is formed in a single integrated circuit chip (a decoder integral - functioning in combination with a physically separate receiver [0003], Figs. 2/2000, fig. 4/2000).

Response to Arguments

Applicant's arguments filed December 1st 2008 have been fully considered but they are not persuasive. Therefore, the rejections made in the previous Office Action are maintained and restated, with changes as needed to address the amendments.

With respect to Leporini's prior art, Applicant argues that "Leporini is prior art under 35 U.S.C. §. 102(e) ", examiner respectfully disagrees. The

copy of the translation of the priority document is not submitted. Therefore, without this translation, Leporini is a prior art under 35 U.S.C. §. 102(b)- see the beginning of the office action. Applicant argues that “Leporini fails to teach... a broadcast receiving module including a first demultiplexer for demultiplexing and a second demultiplexer”, examiner respectfully disagrees. Leporini discloses a first demultiplexer - (Fig. 2000/ 2010 - demultiplexer for demultiplexing the demodulated broadcasting data stream and extracting the data corresponding to remote control selection – Fig. 2000/2080), and a second demultiplexer (Fig. 4/ 2010, 2100 – hard disc - on which audiovisual and other data can be stored – [0170]). Also, Applicant argues that “Leporini fails to disclose a conditional access section being positioned in the broadcasting receiving module”, examiner respectfully disagrees. To perform the function of security, the conditional access section must work together with the receiver/decoder as a part of the hardware – see Fig. 7/3720 and [0246].

Hence, Applicant’s arguments are not persuasive. The disclosed office action is proper, meets all the claim limitations and is maintained.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jivka Rabovianski whose

telephone number is (571) 270-1845. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVEK SRIVASTAVA can be reached on (571) 272-7304. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jivka Rabovianski/

February 10, 2009

/VIVEK SRIVASTAVA/

Supervisory Patent Examiner, Art Unit 2426